

## 5.0 LIST OF PREPARERS AND REVIEWERS

### 5.1 Preparers

A team of engineers, scientists, economists, planners and technicians from AFI and its consultants prepared this DEIS for the Port of the Américas Project. The individual members of the team are listed in Table 5-1 including their parent organization, expertise and role in the preparation of the DEIS.

**Table 5-1: Personnel Who Participated in the Preparation of the DEIS**

Name	Organization	Discipline/Expertise	Role in DEIS Preparation
Quiñones, Ferdinand	CSA Group	BS Chemical Engineering; MS Environmental Engineering	Sr. Advisor CSA, DEIS technical revision
Jimenez Juarbe, Hector	PRIDCO	Juris Doctor	Project Manager, Port of the Américas
Torres, Edgardo	Economic Development Department	MS Business Administration	Assistant Secretary, Department of Economic Development and Commerce
García, Angel	CSA Group	MS Environmental Engineering	Project Manager CSA, DEIS preparation and review
García, Renny	UPR-RUM, Marine Sciences Department	PhD Marine Sciences	Submarine Flora and Fauna Ponce Bay
García, Andrés	AFI	MS Forestry and Biology	Review of Draft of DEIS
González-Liboy, José	CSA Group	MS Marine Sciences	DEIS preparation and review
Badillo, Mari	CSA Group	BS Chemical Engineering	Noise study
Carro, José	CMA	BS Civil Engineering	Traffic Study
Coll, Jorge	CSA Group	BS Biology and Ecology	Wetland Studies

<b>Name</b>	<b>Organization</b>	<b>Discipline/Expertise</b>	<b>Role in DEIS Preparation</b>
Cruz, Ana	CSAGroup	MS Environmental Engineering	Noise Study
Guzmán, Brenda	CSA Group	MPH Marine Biology	Water Quality Study
León, Roberto	CSA Group	MS Environmental Engineering.	DEIS Technical Revision
Lizardi, Agustín	CSA Group	BS Biology	Flora/Fauna and Wetland Studies
López, Thérèse	CSA Group	BA History	Terrestrial Archeology Phase 1A Study
Medina, Norma	CSA Group	MA History/Archeology	Terrestrial Archeology Phase 1A Study
Ortiz, Hilda M.	CSA Group	BS Environmental Engineering	DEIS preparation
Ortiz, Jorge	CSA Group	PhD Limnology	Water Quality Study
Rivera, Ruben	CSA Group	BS Agricultural Engineering	Water Quality and Sediment Quality Studies
Russe, Ramón	CSA Group	BS Chemical Engineering	DEIS Preparation
Salguero, José	CSA Group	MS Biology/Ecology	Flora/Fauna and Wetland Studies
Soler, Walter	CSA Group	BS Marine Biology	Wetland Studies
Terrasa, José Juan	CSA Group	MS, MES Ecology/Hydrology	Flora/Fauna, Wetland, Water Quality and Sediment Quality Studies
Urbina, Lymarie	CSA Group	MS Public Health	DEIS Preparation
Vega, Ivette	CSA Group	BS Chemical Engineering	DEIS Preparation
Vega, Jesús	Consultant	PhD Archaeology	Sub-Aquatic Archeology Phase 1A Study
Vega, Lionel	CSA Group	BS Chemical Engineering	Air Quality Analysis

<b>Name</b>	<b>Organization</b>	<b>Discipline/Expertise</b>	<b>Role in DEIS Preparation</b>
Vicente, Vans	Consultant	PhD Marine Sciences	Submarine Flora and Fauna, Guayanilla Bay
Villamil, José	Estudios Técnicos, Inc.	MS Economics	Socioeconomic and Environmental Justice Studies
Rivera, Lilly	CSA Group	BS Biology MSS Social Policy	Editorial Review
Piazza, Miriam	CSA Group	BS Secretarial Sciences	Document Production and Editing

## 5.2 Reviewers

**Table 5-2: Personnel Who Participated in the Revision of the DEIS**

<b>Name</b>	<b>Organization</b>	<b>Discipline/Expertise</b>	<b>Role in DEIS Preparation</b>
Muñiz, Edwin	USACE San Juan, PR	BA Chemistry	DEIS Review
Rosario, Jose E.	USACE San Juan, PR	MS Marine Sciences	DEIS Review
Acosta, Ivan	USACE Jacksonville	MS Engineering	DEIS Review
Haberer, Yvonne	USACE Jacksonville	BS Natural Resource Management	DEIS Review
Carter, Olice	USACE Jacksonville	MS Environmental Engineering	DEIS Review
Birchett, Thomas	USACE Jacksonville	MA Anthropology	DEIS Review
Schuster, Glenn	USACE Jacksonville	ME Environmental Engineering	DEIS Review

## **6.0 PUBLIC INVOLVEMENT PROGRAM**

### **6.1 Scoping and Draft EIS**

A Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement was published in the Federal Register on August 28, 2001 (Appendix A). The NOI was mailed to Federal and State Agencies on September 10, 2001. In addition a Public Notice was issued on September 10, 2001. The Public Notice was mailed to all entities listed on the mailing list of Public Notices for Puerto Rico. The Public Notice was also published on September 26, 2001 on the *El Nuevo Día* and *El Vocero de Puerto Rico* newspapers.

A scoping meeting was held with federal and state agencies on October 3, 2001, and a public scoping meeting was conducted on November 1, 2001. At the public scoping meeting, 101 people attended and registered 87 comments. Copies of the NOI, Public Notices, comment letters received during the scoping process and transcripts from the scoping meetings are included in Appendix A. A table summarizing all the comments or issues raised during the scoping meetings is also presented in this Appendix.

### **6.2 Agency Coordination**

During April 2001, the Applicant held several meetings with the mayors and other officials of the municipalities of Guayanilla, Peñuelas and Ponce, as well as Commonwealth of Puerto Rico agencies, including AFI, the GDB and PRIDCO. The purpose of these meetings was both to inform and coordinate efforts regarding the planning of the Project and the development of the DEIS.

On April 4, 2001, the Applicant held a preliminary interagency meeting with representatives of the local and federal regulatory agencies to discuss the proposed action. The following Federal and Commonwealth agencies participated in this meeting: Puerto Rico Government Development Bank (GDB); the Municipality of Ponce (Ponce), the Puerto Rico Planning Board (PRPB); the Puerto Rico Power and Energy Authority (PREPA); the Permits and Regulations Administration (ARPE); the Puerto Rico Environmental Quality Board (EQB); the Puerto Rico Department of Natural and Environmental Resources (DNER); the Office of the Governor; USFWS; USGS; USNMF; USEPA; and the USACE.

An additional meeting was held with the USACE in May 9, 2001, at the District Headquarters in Jacksonville, Florida. The purpose of this meeting was to discuss and consider the proposed elements of the PTA in light of the regulatory and permitting requirements. Among the attendees were representatives from the USACE of Puerto Rico, GDB, AFI and the Municipality of Ponce.

On October 3, 2001, the USACE held the Interagency Scoping Meeting with representatives of the local and federal regulatory agencies to discuss the scope of the DEIS and the environmental permits needed for the Project. The following Federal and Commonwealth agencies participated in the Scoping Meeting: US Coast Guard, State Historical Preservation Office, Puerto Rico Government Development Bank (GDB), Municipality of Ponce, Puerto Rico Planning Board (PRPB), Department of Natural and Environmental Resources (DNER), USNMF, USEPA, USGS, and USFWS.

### **6.3 List of Statement Recipients of DEIS**

A circulation list for the DEIS appears in Chapter 7, which includes elected officials, Federal agencies, Commonwealth agencies, municipalities, and public and private organizations. The DEIS will also be made available to the interested parties.

### **6.4 Response to Comments**

Comments received from public and private entities and the general public will be addressed in the Final EIS and included as an appendix to the document.

### **6.5 Circulation of the Final EIS**

The FEIS will be circulated to Federal, Commonwealth and local agencies and all interested parties including those organization or citizen who provide comments on the DEIS. It will available for public review at several locations.

Following completion of the comment period on the FEIS, the USACE will issue a Record of Decision (ROD).

## 7.0 DISTRIBUTION LIST FOR THE DEIS

Copies of the DEIS for the PTA were distributed to the local and federal agencies listed in Table 7-1 below, as part of the consultation process required under the NEPA and the USACE procedures and regulations.

**Table 7-1: Distribution List of the DEIS**

<b>Agency</b>	<b>Address</b>
US Environmental Protection Agency (USEPA)	Caribbean Office, 1492 Ponce de Leon Avenue, Stop 22, San Juan, PR 00909
US Environmental Protection Agency (USEPA)	Region 2 Office, 24 <sup>th</sup> Floor 290 Broadway, NY, NY 10007-1866
US Fish and Wildlife Service (USFWS)	1875 Century Boulevard Atlanta, Georgia 30345
US Fish and Wildlife Service (USFWS)	Boquerón Field Office, P.O. Box 491 Boquerón, PR 00622
International Institute of Tropical Forestry (IITF), US Department of Agriculture	Caribbean Office, P.O. Box 25000 Río Piedras, PR 00928-5000
U.S. Forest Service, USDOl	P.O. Box 25000 Río Piedras, PR 00928-5000
National Marine Fisheries Service (NMFS-NOAA)	9721 Executive Center Dr. N St. Petersburg, FL 33702
National Marine Fisheries Service (NMFS-NOAA)	Preservation Office, Lajas, PR 00667-3323
State Historic Preservation Office (SHPO)	Office of the Governor, La Fortaleza San Juan, PR 00905
US Coast Guard (USCG)	San Martin St. Road #2, km 4.9, Guaynabo, PR 00907
US Geological Survey (USGS)	GSA Center 651 Federal Drive Suite 400-15 Guaynabo, PR 00965
US Natural Resources Conservation Service (NRCS)	PO Box 364868 San Juan, PR 00936-4868
Puerto Rico Government Development Bank (GDB)	Minillas Government Center, San Juan, PR
Puerto Rico Infrastructure Financing Authority (AFI)	235 Arterial Hostos Ave., Suite 1601, SJ, PR 00918-1454

<b>Agency</b>	<b>Address</b>
PR Department of Natural and Environmental Resources (DNER)	Consultations Division, Muñoz Rivera Avenue, Stop 3.5 San Juan, PR, 00906-6600
PR Environmental Quality Board (EQB)	Environmental Assessment Division, National Building, Ponce de León Avenue # 431, San Juan, PR, 00910
PR Planning Board, Division of Consultations (PRPB)	Minillas Government Center Minillas, North Building, San Juan, PR, 00940
Municipality of Ponce	Office of Planning, PO Box 331709, Ponce, PR 00733-1709
Municipality of Guayanilla	PO Box 560550 Guayanilla, PR 00656-0550
Municipality of Peñuelas	PO Box 10 Peñuelas, PR 00624-0010

Copies of the DEIS were also made available to the General Libraries of the following institutions and/or organizations:

- University of Puerto Rico, Río Piedras Campus
- University of Puerto Rico, Mayagüez Campus
- University of Puerto Rico, Ponce Campus
- Interamerican University, Metropolitan Campus
- Interamerican University, San German Campus
- Interamerican University, Ponce Campus
- Catholic University, Ponce Campus
- Metropolitan University, San Juan
- Polytechnic University, San Juan
- Sacred Heart University, San Juan

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## 9.0 GLOSSARY

### A

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<b>aboriginal</b>	First original; indigenous; primitive, native; as the aboriginal tribes of America. Primal eras before the appearance of life on earth.
<b>abrasion platform</b>	The part of the continental shelf and terrace on which a horizontal plane is formed by long continued wave action.
<b>aesthetic</b>	Characterized by a heightened sensitivity of beauty.
<b>aground</b>	A nautical term applied to a ship when its bottom lodges on the ground.
<b>anchor</b>	A heavy object attached to a vessel by a cable or rope and cast overboard to keep the vessel in place either by its weight or by its flukes, which grip the bottom.
<b>alluvial</b>	Relating to the deposits made by flowing water; washed away from one place and deposited in another. Its form reflects the load and discharge of the river rather than the constraints of a bedrock.
<b>alluvial fan</b>	A cone-shaped deposit of cobbles, sand, gravel, silt, and clay, built up by rivers.
<b>alluvium</b>	Deposits of earth, sand, gravel and other transported matter, made by rivers, floods, or other causes, upon land not permanently submerged beneath the waters of lakes or seas.
<b>aquifer</b>	A body of rock that contains significant quantities of water that can be tapped by wells or springs.

### B

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<b>baitfish</b>	A small fish, such as a minnow, used for fishing bait.
<b>ballast</b>	Heavy material that is placed in the hold of a ship or the gondola of a balloon to enhance stability.
<b>bathymetry</b>	The measurement of the depth of bodies of water.
<b>benthos</b>	(Greek) <i>benthic</i> . The collection of organisms living on or in sea or lake bottoms.

<b>berth</b>	A space for a ship to dock or anchor.
<b>bilge</b>	The part of a ship's hull or bottom which is broadest and almost nearly flat, and on which she would rest if aground.
<b>breakwater</b>	A barrier that protects a harbor or shore from the full impact of waves.
<b>breccia</b>	Rock composed of sharp-angled fragments embedded in a fine-grained matrix.
<b>bioaccumulation</b>	The accumulation of a substance, such as a toxic chemical, in various tissues of a living organism.
<b>bioassay</b>	Determination of the strength or biological activity of a substance, such as a drug or hormone, by comparing its effects with those of a standard preparation on a culture of living cells or a test organism.
<b>biosphere</b>	The part of the earth and its atmosphere in which living organisms, exist or that is capable to supporting life.
<b>boundary</b>	That which indicates or fixes a limit or extent, or marks a bound, as of a territory; a bounding or separating line; a real or imaginary limit.

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## C

<b>canoe</b>	A boat formed of trunk of a tree, excavated, by cutting or burning, into a suitable shape. It is propelled by a paddle or paddles, or sometimes by sail, and has no rudder.
<b>carbonate</b>	A salt of carbonic acid containing the carbonate ion, $\text{CO}_3^{-2}$ . The free ion has a triangular triangular.
<b>catalyst</b>	Agent that provokes or speeds significant change or action.
<b>coral</b>	A rocklike deposit consisting of the calcareous skeletons secretions by various anthozoans. Coral deposits often accumulate to form rocks or islands in warm seas.
<b>concomitant</b>	One that occurs or exists concurrently with another.
<b>crane</b>	A machine for hoisting and moving heavy objects by means of cables attached to a movable boom.

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**Cretaceous** The most recent geological period of the Mesozoic era, which began about 135 million years ago and lasted for about 60 million years.

**criteria** A standard, rule, or test on which a judgment or decision can be based.

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**D**

**debris** The scattered remains of something broken or destroyed; rubble or wreckage. (*Geol.*) An accumulation of relatively large rock fragments. (*Biol.*) The fragmented remains of dead or damaged cells or tissue.

**degradation** A decline to a lower condition, quality, or level.

**dewater** To remove water from (a waste product or streambed, for example).

**dock** An artificial basin or an inclosure in connection with a harbor or river, used for the reception of vessels, and provided with gates for keeping in or shutting out the tide. The slip or water way extending between two piers or projecting wharves, for the reception of ships; sometimes including the piers themselves; as, to be down on the dock.

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**E**

**ecology** The science of the relationships between organisms and their environments. Also called *bionamics*.

**ecosystem** An ecological community together with its environment, function as a unit.

**ecozone** A large, terrestrial ecosystem unit that contains distinctive sets of non-living and living resources that are ecologically related as a system.

**emission** A substance discharged into the air, (as by smokestack or an internal combustion engine).

**embayment** The formation of a bay.

**endanger** To expose to harm or danger; imperil. To threaten with extinction.

**entanglement** An obstruction of cables and spars across a river or harbor entrance.

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**F**

**fault** (*Geol. & Mining*) A dislocation caused by a slipping or rock masses along a plane of fracture; also the dislocated structure resulting from such slipping.



<b>fauna</b>	All the animal life in a particular region. The animals of any given area or epoch.
<b>feasible</b>	Capable of being accomplished or brought about; possible.
<b>finback</b>	A rorqual, especially <i>Balaenoptera physalus</i> of the Atlantic and Pacific coasts, that attains a length of about 21 meters (70 feet). Also called fin whale.
<b>flora</b>	(Bot.) The complete system of vegetable species growing without cultivation in a given locality, region, or period; a list of description of, or treatise on, such plants.
<b>foodplain</b>	A plain bordering a river and subject to flooding.
<b>free port</b>	A port or an area of a port in which imported goods can be held or processed of customs duties before re-export.
<b>frigate</b>	A fast, light vessel, such as a sailboat. A high-speed, medium-sized sailing war vessel of the 17 <sup>th</sup> , 18 <sup>th</sup> , and 19 <sup>th</sup> centuries.
<b>G</b>	
<b>galley</b>	A vessel propelled by oars, whether having masts and sails. A large vessel for war and national purposes.
<b>geomorphology</b>	(Geol.) the branch of geology that studies the characteristics and configuration and evolution of rocks and land forms.
<b>glaciation</b>	The process of covering with glaciers or masses of ice.
<b>H</b>	
<b>habitat</b>	The area or environment where an organism or ecological community normally lives or occurs: <i>a marine habitat</i> .
<b>hailed</b>	To transport, as with a truck or cart.
<b>Holocene</b>	Of or belonging to the geologic time, rock series, or sedimentary deposits of the more recent of the two epochs of the <i>Quaternary Period</i> , beginning at the end of the last Ice Age about 11,000 years ago and characterized by the development of human civilizations.
<b>hull</b>	The frame and body of the ship exclusive and masts or superstructure.

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<b>hydrogeology</b>	The branch of geology that deals with the occurrence, distribution, and effect of ground water.
<b>hydrography</b>	The scientific description and analysis of the physical conditions boundaries, flow, and related characteristics of the earth's surface waters.
<b>hydrology</b>	Scientific discipline concerned with the waters of the earth, incl. their occurrence, distribution circulation via the hydrologic cycle, and interactions with living things. It also deals with the chemical and physical properties of water in all its phases.
<b>hydrosphere</b>	All the waters on the surface of the Earth.
<b>hydrophyte</b>	A plant adapted to grow in water.

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**I**

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<b>in-depth</b>	Detailed; thorough
<b>infrastructure</b>	The basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons.
<b>igneous</b>	( <i>Geol.</i> ) Resulting from, or produced by, the action of fire; as lavas and basalt are igneous rocks. Produced under conditions involving intense heat. " <i>Igneous rock</i> is rock formed by solidification from a molten state; especially molten magma".
<b>intrusive rocks</b>	( <i>Geol.</i> ) rocks which have been forced, while in a plastic or melted state, into the cavities or between the cracks or layers of other rocks. The term is sometimes used as equivalent to <i>plutonic rocks</i> . <i>It is then contrasted with effusive or volcanic rocks.</i>
<b>irrigation</b>	The act or process of irrigating, or the state of being irrigated; especially, the operation of causing water to flow over lands, for nourishing plants.
<b>isostatic</b>	( <i>Physics &amp; Geol.</i> ) Subjected to equal pressure from every side; being in hydrostatic equilibrium, as a body submerged in a liquid at rest; pertaining to, or characterized by, isostasy.

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**K**

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<b>key</b>	A reef or low island.
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**L**

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<b>lacustrine</b>	Living or growing in or along the edges of lakes.
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**liquefy** To cause to become liquid, especially: a) To melt ( a solid) by heating.  
b) To condense (a gas) by cooling.

**lunate** Shaped like a crescent.

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**M**

**magnetometer** (Physics) An instrument for measuring the intensity of magnetic forces; also, less frequently, an instrument for determining any of the terrestrial magnetic elements, as the dip and declination.

**marl** (Geol.) A variety of sandstone, usually imperfectly consolidated, consisting largely of glauconite, a silicate of iron and potash of a green color, mixed with sand and a trace of phosphate of lime.

**marsch** (1) A tract of soft wet land, commonly covered partially or wholly with water; a fen; a swamp. (2) (Bot.) a plant of the genus common in marshes near the seashore, and whose root is much used in medicine as a demulcent.

**Miocene** An epoch in Earth's history from about 24 to 5 million years ago. Also refers to the rocks that formed in that epoch.

**molluscan** Of or relating to the mollusks.

---

**N**

**navigation** Travel or traffic by vessels, especially commercial shipping.

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**O**

**oceanography** The exploration and scientific study of the ocean and its phenomena.

**Oligocene** Of or pertaining to or designating, certain tertiary strata which occupy an intermediate position between *Eocene* and *Miocene* period. The corresponding system of rocks.

**ordinance** A statute or regulation, especially one enacted by a city govern.

**organic** (1) (*Biol.*) of or pertaining to an organ or its functions, or to objects composed of organs; consisting of organs, or containing them; as, the organic structure of animals and plants; exhibiting characters peculiar to living organisms; as, organic bodies, organic life, organic remains. (2) (*Chem.*) the analysis of organic compounds, concerned chiefly with the determination of carbon as carbon dioxide, hydrogen as water, oxygen as

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	the difference between the sum of the others and 100 per cent, and nitrogen as free nitrogen, ammonia, or nitric oxide.
<b>orography</b>	The study of the physical geography of mountains and mountain ranges.
<b>overseas</b>	Beyond the sea; abroad. Of, relating to, originating in, or situated in countries across the sea.
<b>P</b>	
<b>parcel</b>	A plot of land, usually a division of a larger area.
<b>patache</b>	A small vessel.
<b>pathogen</b>	An agent that causes disease, especially a living microorganism such as a bacterium or fungus.
<b>pelagic</b>	Refers to the open water of the ocean, lacking association with the shore or the bottom. <i>cf. Abyssal, Neritic, Benthic, Littoral.</i>
<b>pelocipods</b>	An aquatic mollusk of the class Bivalvia, with a laterally compressed body enclosed within two hinged shells. Also called lamellibranch.
<b>pier</b>	A platform extending from a shore over water and supported piles or pillars, used to secure, protect, and provide access to ships boats.
<b>Plankton</b>	The floating or weakly swimming animal and plant organisms occurring at any depth in lakes, ponds, streams, or seas; often microscopic in size.
<b>Pleistocene</b>	A epoch in Earth history from about 2-5 million years to 10,000 years ago. Also refers to the rock and sediment deposited in that epoch.
<b>piroque</b>	A canoe made from a hollowed tree trunk; a piragua.
<b>plain</b>	Level land, usually an open field, or a broad stretch of land with an even surface or a little varied surface.
<b>plutonic</b>	Pertaining to the interior of the earth, subterranean. ( <i>Geol.</i> ) the influence of volcanic heat and other subterranean forces under pressure; granite, porphyry, and some other <i>igneous rocks</i> , supposed to have consolidated from a melted state at a great depth from the surface.
<b>pollutant</b>	Something that pollutes, especially a waste material that contaminates air, soil, or water.

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**pond** A still body of water smaller than a lake.

**Post-Panamax** Refers to a generation of ships which are too wide to go through the Panamá canal limiting them to the Caribbean, Atlantic and Europe.

**profit** The return received on an investment after all charges have been paid.

---

**Q**

**quadrant** Any of the four areas into which a plane is divided by the reference axes in a Cartesian coordinate system, designated first, second, third, and fourth, counting counterclockwise from the area in which both coordinates are positive.

**Quaternary** The period of Earth's history from about 2 million years ago to the present, also, the rocks and deposits of that age.

---

**R**

**rubble** A loose mass of angular fragments of rock or masonry crumbled by natural or human forces.

**runoff** The part of precipitation which as surface run-off flows of the land without sinking into the soil and the part that enters the ground and passes through into surface streams as groundwater run-off.

---

**S**

**Saladoid** Characteristically, Saladoid pottery is thin and fine with slight grit temper, and is distinguished especially by white-on-red painted designs.

**salina** A salt flat.

**sedimentary facies** Different, but contemporaneous and juxtaposed, sedimentary rocks. Terrigenous facies are accumulations of particles eroded from older rocks and transported to the depositional site. Biogenic facies are accumulations of whole or fragmented shells and other hard parts of animals. Chemical facies result from precipitation or inorganic material from solution. The shapes and characteristics of facies may change as conditions change over time.

**shoal** A sandy elevation of the bottom of a body of water, constituting a hazard to navigation.

**scrivener** A professional writer; one whose occupation is to draw contracts or prepare writings.

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<b>sedimentary</b>	of or relating to rocks formed by the deposition of sediment. ( <i>Geol.</i> ) <i>Aqueous rocks</i> , those which are deposited from water and lie in strata, as proposed to <i>volcanic rocks</i> , which are of <i>igneous origin</i> ;--called also <i>sedimentary rocks</i> .
<b>sloop</b>	A single-masted, fore-and-aft-rigged sailing boat with a short standing bowsprit or none at all and a single headsail set from the forestay.
<b>shipwrecks</b>	The breaking in pieces, or shattering, of a ship or other vessel by being cast ashore or driven against rocks, shoal, etc., by the violence of the winds and waves.
<b>shore</b>	The land along the edge of a body of water.
<b>shore platform</b>	Marine platform, marine terrace, marine flat.
<b>shrub</b>	( <i>Bot.</i> ) A woody plant of less size than a tree, and usually with several stems from the same root.
<b>silt</b>	A fine grained sedimentary deposit, the rock particles of which range from 0.002 to 0.06 mm. An aggregate of mineral grains or rock fragments with diameters ranging from 0.0625 to 0.222 mm.
<b>site</b>	The piece of land on which something is located.
<b>spawning</b>	To deposit eggs; produce spawn.
<b>subaerial</b>	Occurring on land, at the earth's surface, as opposed to underwater or underground.
<b>submarine canyon</b>	Deep, steep-sided valley cut in the continental shelf or slope.
<b>submerge</b>	Beneath the surface of the water. Growing or remaining under water.
<b>swell</b>	To increase in size or volume as a result of internal pressure; expand.
<b>stratification</b>	Formation or deposition of layers, as of rock or sediments.

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**T**

<b>tectonic</b>	( <i>Geol.</i> ) of or pertaining to or designating the rock structures and external forms resulting from the deformation of the earth's crust as <i>tectonic arches</i> or valley.
<b>Terrain</b>	An area of land; ground.

<b>terrestrial</b>	Of or relating to the earth or its inhabitants. ( <i>Biol.</i> ) Living or growing on land; not aquatic: <i>a terrestrial plant or animal</i> .
<b>Tertiary</b>	Of or belonging the geologic time, system of rocks, or sedimentary deposits of the first period of <i>Cenozoic Era</i> characterized by the appearance of modern flora and of apes and other mammals.
<b>TEU</b>	Twenty-Foot Equivalent. Standard unit for maritime container traffic. It is equivalent to a container 20 feet long, 8 feet tall and 8 feet wide.
<b>topography</b>	The study or description of an anatomical region or part.
<b>trade winds</b>	Winds moving from the north or south toward the equator, so named because the early traders used this winds to sail to America from Europe.
<b>traffic</b>	The commercial exchange of goods; trade.
<b>transship</b>	To transfer from one ship or conveyance to another.
<b>tugboat</b>	A small, powerful boat designed for towing or pushing larger vessels.
<b>turbidity</b>	Muddiness created by stirring up sediment or having foreign particles suspended.
<b>V</b>	
<b>Value-added</b>	Stages during the production process of manufactured goods or services that include, among others, finishing, sub-assemblies, packaging or other physical processes (manufacturing or industrial), information interchange, logistics or any other financial or trade operations.
<b>W</b>	
<b>water table</b>	The level below which the ground is completely saturated with water.
<b>weirs</b>	A fence or wattle placed in a stream to catch or retain fish.
<b>wreck</b>	To destroy, disable, or seriously damage, as a vessel, by driving it against the shore or on rocks, by causing it to become unseaworthy, to founder, or the like, to shipwreck.
<b>Z</b>	
<b>zemi</b>	A sacred object, or the supernatural force it represents.

## **10.0 ACRONYMS AND ABBREVIATIONS**

AFI	Puerto Rico Infrastructure Financing Authority
AMSL	Above Mean Sea Level
ANS	Aquatic Nuisance Species
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
CAA	Clean Air Act
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resource System
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES	Sedimentation and Erosion Control
CORCO	Commonwealth Oil Refining Company
CORRACTS	Corrective Action Reports
CSA	Custodio, Suárez and Associates
CWA	Clean Water Act
CWMB	California Waste Management Board
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibels
DC	Desarrollo Conceptual
DEIS	Draft Environmental Impact Statement
DNER	Department of Natural and Environmental Resources
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EI	Edificación Industrial
EJ	Environmental Justice
EPA	Environmental Protection Agency



EQB	Environmental Quality Board
ER-L	Effects Range Low
ERNS	Emergency Response Notification System
ESA	Endangered Species Act
FAPPA	Farmland Protection Policy Act
FCMA	Fisheries Conservation and Management Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Act
FINDS	Facility Identification Initiative Program Summary Reports
FIRM	Flood Insurance Rate Map
FWCA	Fish and Wildlife Coordination Act
FWCA	Fish and Wildlife Coordination Act
FWPRA	Federal Water Project Recreation Act
FY	Fiscal Year
GDB	Government Development Bank
GDP	Gross Domestic Product
GNP	Gross National Product
hp	Horsepower
HTA	Highway and Transportation Authority
IC	Puerto Rico Institute of Culture
IL-2	Limited Heavy Industrial
ISO	International Standards Organization
kHz	kilo Hertz
KW	kilowatts
LACS	Luis Ayala Colón Sucrs.
LNG	Liquid Natural Gas
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
m	meter
M	million

m <sup>3</sup>	cubic meters
MCE	maximum credible earthquake
mg/l	Milligrams per Liter
MGD	Million Gallons per Day
MMPA	Marine Mammal Protection Act
MPH	Miles per Hour
MPRSA	Marine Protection, Research and Sanctuaries Act
MSD	Marine Sanitation Devices
MW	Megawatts
NAAQS	National Ambient Air Quality Standards
NAAQS	National Ambient Air Quality Standards
NCDB	National Compliance Data Base
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
OBRA	Omnibus Budget Reconciliation Act
ODMDS	Offshore Dredged Material Dumping Site
° F	Fahrenheit Degree
PCB	Polychlorinated Biphenyl Compounds
PCS	Permit Compliance System
PEIS	Preliminary Environmental Impact Statement
PPG	Pittsburgh Plate Glass
PRASA	Puerto Rico Aqueduct and Sewer Authority
PREPA	Puerto Rico Electric Power Authority
PRHTA	Puerto Rico Highway and Transportation Authority
PRPA	Puerto Rico Ports Authority

PRPB	Puerto Rico Planning Board
PTA	Port of the Américas
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RFI	RCRA Facility Investigation
RHA	Rivers and Harbors Act
ROD	Record of Decision
RWWTP	Regional Wastewater Treatment Plant
SC	Siting Consultation
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SCS	Soil Conservation Survey
SPCCP	Spill Prevention, Control, and Countermeasures Plan
SVOC	Semi-volatile Organic Compounds
SWMA	Solid Waste Management Authority
SWMU	Solid Waste Management Units
SWPP	Storm Water Pollution Prevention Plan
TEL	Threshold Effects Level
TEU	Twenty-foot Equivalent Unit
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage and Disposal Facility
UCC	Union Carbide Caribe
USA	United States of America
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service
USGS	US Coast Guard
USGS	US Geological Survey
UST	Underground Storage Tank
UST	Underground Storage Tank Facilities
VOC	Volatile Organic Compounds

WES	Waterways Experiment Station
WGS	Waterways Experiment Section
WQC	Water Quality Certificate
WWTP	Wastewater Treatment Plants
Yd <sup>3</sup>	Cubic Yard

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